

We claim:-

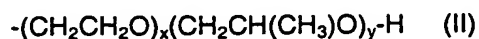
1. The use of an aqueous polymer dispersion comprising dispersed particles of at least one polymer A1 having a glass transition temperature, T_g , of from -20°C to $+35^{\circ}\text{C}$ and obtainable through free-radical emulsion polymerization in the presence of a polymer A2 synthesized from
- from 50 to 99.5% by weight of at least one ethylenically unsaturated monocarboxylic and/or dicarboxylic acid whose carboxylic groups can form an anhydride group, or mixtures thereof,
 - from 0.5 to 50% by weight of at least one ethylenically unsaturated compound selected from the esters of ethylenically unsaturated monocarboxylic acids and the monoesters and diesters of ethylenically unsaturated dicarboxylic acids with an amine containing at least one hydroxyl group, and
 - up to 20% by weight of at least one further monomer
- as binder for producing abrasive material.
2. The use of an aqueous polymer dispersion as claimed in claim 1 wherein the polymer A2 contains as ethylenically unsaturated monocarboxylic and/or dicarboxylic acid at least one compound selected from C_3 - C_{10} monocarboxylic acids and C_4 - C_8 dicarboxylic acids.
3. The use of an aqueous polymer dispersion as claimed in claim 1 or 2 wherein the amine containing at least one hydroxyl group is selected from amines of the formula (I)



where

R^c is C_6 to C_{22} alkyl, C_6 to C_{22} alkenyl, aryl- C_6 - C_{22} alkyl or aryl- C_6 - C_{22} alkenyl, the alkenyl radical having 1 or 2 or 3 nonadjacent double bonds,

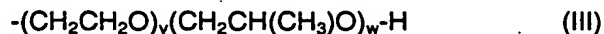
R^a is hydroxy- C_1 - C_6 alkyl or a radical of the formula II



where

in the formula II the sequence of the alkylene oxide units is arbitrary and x and y independently of each other are an integer from 0 to 100, the sum of x and y being > 1,

R^b is hydrogen, C_1 to C_{22} alkyl, hydroxy- C_1 - C_6 alkyl, C_6 to C_{22} alkenyl, aryl- C_6 - C_{22} alkyl, aryl- C_6 - C_{22} alkenyl or C_5 to C_8 cycloalkyl, the alkenyl radical having 1 or 2 or 3 nonadjacent double bonds,
or R^b is a radical of the formula III



where

in the formula III the sequence of the alkylene oxide units is arbitrary and v and w independently of each other are an integer from 0 to 100,

and mixtures thereof.

4. The use of an aqueous polymer dispersion as claimed in any of claims 1 to 3 wherein the weight ratio based on solids of polymer A1 to polymer A2 is in the range from 7:1 to 1:7, preferably 3:1 to 1:3.
5. The use of an aqueous polymer dispersion as claimed in any of claims 1 to 4 with the further addition as crosslinker of an alkanolamine having at least two hydroxyl groups.
6. The use of an aqueous polymer dispersion as claimed in any of claims 1 to 5 wherein the polymer or polymers A1 have a glass transition temperature, T_g , of from -20°C to $+30^\circ\text{C}$.
7. The use of an aqueous polymer dispersion as claimed in any of claims 1 to 6 wherein said polymers A₁ are copolymers based on a hard comonomer having a glass transition temperature of from 65 to 165°C and a soft comonomer having a glass transition temperature of from -65 to -10°C .
8. The use of an aqueous polymer dispersion as claimed in any of claims 1 to 7 which following its preparation is adjusted to a pH of from 2 to 8 by addition of organic or inorganic bases.

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9. The use of an aqueous polymer dispersion as claimed in any of claims 1 to 8 which is mixed with one or more organic or inorganic, polymeric mixing components in dissolved or dispersed form.
- 5 10. Abrasive material comprising as binder an aqueous polymer dispersion of any of claims 1 to 9.
11. Abrasive paper comprising as binder an aqueous polymer dispersion of any of claims 1 to 9.
- 10 12. Abrasive cloth comprising as binder an aqueous polymer dispersion of any of claims 1 to 9.
- 15 13. A scouring pad comprising as binder an aqueous polymer dispersion of any of claims 1 to 9.